

(Practitioner's Docket No. IN-PAT00293/BC1-0067)

**REMARKS**

Upon entry of the present invention claims 1-19 are pending. Claim 17 has been amended per the Examiner's suggestion.

1. **Rejection of claims 1-19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The PTO states:

the specification, while being enabling for oligomers and polymers containing at least one allophanate group or at least one carbamate group, does not reasonably provide enablement for oligomers or polymers containing at least one allophanate group and at least one carbamate group.

(Office Action of 1-19-2006, page 3)

Applicants appreciate the detailed basis for rejection but must respectfully disagree and traverse the rejection.

To begin with, the first paragraph of Section 112 requires nothing more than objective enablement. *In re Marzocchi* 169 U.S.P.Q. 367 (C.C.P.A. 1971). The C.C.P.A. pointed out that "[n]ot every last detail [of an invention need] be described [in a patent specification], else patent specifications would turn into production specifications, which they were never intended to be." *In re Gay*, 135 U.S.P.Q. 311, 316 (C.C.P.A. 1962). Indeed, a specification need not describe—and best omits—that which is well-known in the art. *In re Buchner*, 18 U.S.P.Q.2d 1331, 1332 (Fed. Cir. 1991). The Federal Circuit has noted that "[t]he scope of the claims must be less than or equal to the scope of the enablement. The scope of enablement, in turn, is that which is disclosed in the specification *plus* the scope of what would be known to one of ordinary skill in the art without undue experimentation. *National Recovery Technologies, Inc. v. Magnetic Separation Systems, Inc.* 49 U.S.P.Q.2d 1671 (Fed. Cir. 1999) (*emphasis added*).

A patent application is presumptively enabled when filed. "[A] specification...

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must be taken as in compliance with the enablement requirement of the first paragraph of §112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support.” *In re Marzocchi*, 169 U.S.P.Q. 367 (C.C.P.A. 1971).

Thus, the PTO has the burden of giving reasons, supported by the record as a whole, as to why the specification as a whole is not enabling, e.g., entails undue experimentation. *In re Morehouse* 192 U.S.P.Q. 29 (CCPA 1976).

The Federal Circuit identified eight factors for use in determining whether a disclosure is sufficient to enable one of ordinary skill in the art to practice a claimed invention throughout its scope without having to engage in undue experimentation: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988).

The importance of these factors is reflected in the PTO's own enablement teaching materials which state that:

...[i]t is improper to conclude that a disclosure is not enabling based on an analysis of only one of the [*Wands*] factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of non-enablement must be based on the evidence as a whole.

35 U.S.C. §112 First Paragraph Enablement Training Manual at 8.

Applicants must respectfully submit that the instant rejection is predicated upon an improper application of the *Wands* factors and that the PTO has failed to meet its burden of providing a prima facie case.

The express statements of the Office Action of 1/19/2006 indicate that specific portions of Applicants' Specification were not considered. For example, paragraphs 43-49 of Applicants' Specification teach making oligomers and polymers (A) that contain

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allophanate groups and polymers (A) that containing carbamate groups. Further, paragraph 50 describes a method copolymerizing a monomer mixture and reacting the resultant hydroxyl-containing (meth)acrylate copolymer with at least one alkylurethane. Those skilled in the art would readily recognize that the alkylurethane group could be either a carbamate group or an allophanate group and that copolymerizing a polymer having a carbamate group and a polymer having an allophanate group will result in a copolymer having both an allophanate group and a carbamate group.

Thus, it is respectfully submitted that the PTO did not meet its burden in demonstrating a lack of enablement. Further, it is respectfully submitted that, when all the teachings in the specification are considered, claims 1-19 are enabled. Therefore, removal of the indefiniteness rejection to claims 1-19 is respectfully requested.

**2. Rejection of claims 1-19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The PTO states:

the specification, while being enabling for preparing a urea or a urea derivative prepared by reacting amine with at least one polyisocyanate, does not reasonably provide enablement for preparing a urea or a urea derivative prepared by reacting water with at least one polyisocyanate.

(Office Action of 1-19-2006, pages 3 and 4)

Applicants appreciate the detailed basis for rejection but must respectfully disagree and traverse the rejection.

To begin with, the first paragraph of Section 112 requires nothing more than objective enablement. *In re Marzocchi* 169 U.S.P.Q. 367 (C.C.P.A. 1971). The C.C.P.A. pointed out that "[n]ot every last detail [of an invention need] be described [in a patent specification], else patent specifications would turn into production specifications, which they were never intended to be." *In re Gay*, 135 U.S.P.Q. 311, 316 (C.C.P.A. 1962). Indeed, a specification need not describe—and best omits—that which is well-known in the art. *In re Buchner*, 18 U.S.P.Q.2d 1331, 1332 (Fed. Cir.

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1991). The Federal Circuit has noted that "[t]he scope of the claims must be less than or equal to the scope of the enablement. The scope of enablement, in turn, is that which is disclosed in the specification *plus* the scope of what would be known to one of ordinary skill in the art without undue experimentation. *National Recovery Technologies, Inc. v. Magnetic Separation Systems, Inc.* 49 U.S.P.Q.2d 1671 (Fed. Cir. 1999) (*emphasis added*).

A patent application is presumptively enabled when filed. "[A] specification... must be taken as in compliance with the enablement requirement of the first paragraph of §112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." *In re Marzocchi*, 169 U.S.P.Q. 367 (C.C.P.A. 1971).

Thus, the PTO has the burden of giving reasons, supported by the record as a whole, as to why the specification as a whole is not enabling, e.g., entails undue experimentation. *In re Morehouse* 192 U.S.P.Q. 29 (CCPA 1976).

The Federal Circuit identified eight factors for use in determining whether a disclosure is sufficient to enable one of ordinary skill in the art to practice a claimed invention throughout its scope without having to engage in undue experimentation: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988).

The importance of these factors is reflected in the PTO's own enablement teaching materials which state that:

...[i]t is improper to conclude that a disclosure is not enabling based on an analysis of only one of the [*Wands*] factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of non-enablement must be based on the evidence as a whole.

35 U.S.C. §112 First Paragraph Enablement Training Manual at 8.

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Applicants must respectfully submit that the instant rejection is predicated upon an improper application of the *Wands* factors and that the PTO has failed to meet its burden of providing a prima facie case.

The express statements of the Office Action of 1/19/2006 indicate that specific portions of Applicants' Specification were not considered. For example, paragraphs 53-54 of Applicants' Specification teach reacting at least one amine and/or water with at least one polyisocyanate in the presence of at least one oligomer/or polymer. One skilled in the art would readily recognize that water can react with polyisocyanate. The reaction between water and polyisocyanate forms an unstable carbamic acid. The carbamic acid then decomposes to generate carbon dioxide and amine. The amine then reacts with additional isocyanate to yield urea.

Thus, it is respectfully submitted that the PTO did not meet its burden in demonstrating a lack of enablement. Further, it is respectfully submitted that, when all the teachings in the specification are considered, claims 1-19 are enabled. Therefore, removal of the indefiniteness rejection to claims 1-19 is respectfully requested.

3. **Rejection of claims 1-19 for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The PTO states:

the recitation " a urea or a urea derivative prepared by reacting with at least one amine and/or water with at least one polyisocyanate" is considered indefinite.

(Office Action of 1/19/2006, page 4)

The PTO further states:

can a urea derivative be prepared by reacting water with at least one polyisocyanate?

(Office Action of 1/19/2006, page 4)

Applicants appreciate the detailed basis for rejection but must respectfully disagree and traverse the rejection.

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Whether a claim is invalid under the second paragraph of Section 112 requires a determination of whether those skilled in the art would understand what is claimed when the claim is read in light of the specification. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 802 F.2d 1565, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

Those skilled in the art would understand what is claimed in light of Applicants' Specification. For example, paragraphs 53-54 of Applicants' Specification teach reacting at least one amine and/or water with at least one polyisocyanate in the presence of at least one oligomer and/or polymer. Those skilled in the art would readily recognize that water can react with polyisocyanate. For example, water can react with polyisocyanate to form an unstable carbamic acid. The carbamic acid can then decompose to generate carbon dioxide and amine. The amine can then react with additional isocyanate to yield a urea derivative. Therefore, the polyisocyanate can react with water forming a urea derivative.

Thus, it is respectfully submitted that the Applicants did particularly point and out and distinctly claim the subject matter which Applicants regarded as the invention. Therefore, removal of the indefiniteness rejection to claims 1-19 is respectfully requested.

4. **Rejection of claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite**

Claim 17 (lines 2), has been rejected as being an improper use of a Markush Group. Applicants have amended claim 17 per the examiners' suggestion. Therefore, removal of the rejection to claim 17 is respectfully requested.

5. **Rejection of claim 10 under 35 U.S.C. § 112, second paragraph, as being indefinite**

The PTO states

the term "modified" is considered indefinite because it is not defined in the specification

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Applicants appreciate the detailed basis for rejection but must respectfully disagree and traverse the rejection.

Whether a claim is invalid under the second paragraph of Section 112 requires a determination of whether those skilled in the art would understand what is claimed when the claim is read in light of the specification. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 802 F.2d 1565, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

It is well known by those skilled in the art that once formed, pyrogenic silica can be modified through chemical reactions. For example, the pyrogenic silica can be modified through reactions with different organic compounds. This modification can change the physical and/or chemical properties at the surface of the silica. Since those of ordinary skill in the art would recognize the meaning of modified pyrogenic silica, Applicants respectfully submit that the claim 10 is definite.

Thus, it is respectfully submitted that the Applicants did particularly point and out and distinctly claim the subject matter which Applicants regarded as the invention. Therefore, removal of the indefiniteness rejection to claims 12-14 is respectfully requested.

**6. Rejection of claim 12, claim 13, and claim 14 under 35 U.S.C. § 112, second paragraph, as being indefinite**

The PTO states:

Claim 12 (line 3), claim 13 (line 3), claim 14 (line 1), the recitations "complementary" are considered indefinite because the recited term is not defined in the specification.

(Office Action of 1/19/2006, page 5)

Applicants appreciate the detailed basis for rejection but must respectfully disagree and traverse the rejection.

Whether a claim is invalid under the second paragraph of Section 112 requires a determination of whether those skilled in the art would understand what is claimed when the claim is read in light of the specification. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 802 F.2d 1565, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

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Applicants submit that those skilled in the art would understand what is claimed in light of Applicants' Specification. For example, paragraphs 59-61 of Applicants' Specification teach using crosslinking agent and using self crosslinking to join individual oligomers and/or polymers. Specific suitable complementary reactive functional groups are also taught. One skilled in the art would readily recognize that "at least one crosslinking agent containing on average per molecule at least two reactive functional groups which are complementary to allophanate groups" (as recited in claim 12) refers to functional groups that will react with the allophanate to form crosslinking bonds between molecules. Further, one skilled in the art would recognize that "at least one reactive functional group which is complementary to carbamate and allophanate groups" (as recited in claim 13 and claim 14) refers to groups that can react with carbamate and allophanate groups to join separate oligomers and/or polymers.

Thus, it is respectfully submitted that the Applicants did particularly point and out and distinctly claim the subject matter which Applicants regarded as the invention. Therefore, removal of the indefiniteness rejection to claims 12-14 is respectfully requested.



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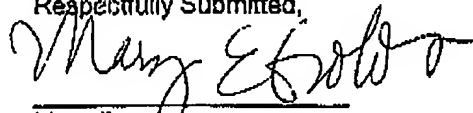
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**CONCLUSION**

Applicant(s) respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,



Mary E. Goleta  
Registration No. 36,814  
Cantor Colburn LLP  
(248) 524-2300

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**CORRESPONDENCE ADDRESS ONLY**

BASF Corporation  
1609 Biddle Avenue  
WYANDOTTE, MI 48192  
Customer No. 26922